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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/808,501  
Filing Date: March 14, 2001  
Appellant(s): BEAVEN ET AL.

\_\_\_\_\_  
Mr. Michael R. Long  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed on 7/31/2009 appealing from the Office action mailed on 8/20/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-14, 17-30, 33-46, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negri (US 2002/0059079) in view of Schmidt ("QoS for Distributed Object Computing Middleware -- Fact or Fiction?," May 22nd, 1997, Columbia University).

Per claim 1:

Negri discloses:

-a component specification element that specifies components (i.e. "Defines the principal components in a service.

These include the software services and related physical elements that combine to deliver the service," 0048);

Negri does not explicitly disclose that the components are reusable components. However, Schmidt discloses using a reusable component was known at the time the invention was made to "reduce development effort and increase software quality (page 1, first paragraph)."

Therefore, it would have been obvious for one skilled in the art of the pertinent art to modify Negri's disclosed system to incorporate the teachings of Schmidt. The modification would be obvious because one skilled in the art would be motivated to reuse the existing components for fast and flexible application development.

-a control flow specification element that specifies control flows (i.e. "The business process involves the flow of data and control through a complex arrangement of these components...eService management must understand this flow of data," 0046; 0049, "the relationship graph defines the actual topology of the model. Components can depend on each other," 0050)

Negri teaches

- a data flow specification element that specifies data flows (i.e. "The business process involves the flow of data and control through a complex arrangement of these components...eService management must understand this flow of data," 0046; 0049; "the relationship graph defines the actual topology of the model. Components can depend on each other," 0050);

-a resource specification element that specifies resources (i.e. "Components can depend on each other...but they can also share common resources," 0050, 0051, 0060, 0063);

-a quality of service specification derivation element, the quality of service specification derivation element (i.e. "deriving an e-service management strategy based on said business process specification...ensuring the service quality of said e-service," claim 1; 0036; 0050; 0057; 0063) having for output an application model in combination with a quality of service specification derived by implication from relations between the components, the control flows, the data flows and the resources (i.e. "a service delivery model...to assure the customer experience at the point of service delivery," 0063; "An eService model...Defines the principal components in a service...Components are modeled by service delivery function...Process and responsibilities may be defined by function...Establishes implicit and explicit relationships...share common resources, exchange data with each other, collect common statistics, and work together in complex flows of control," 0047-0050; 0046);

-wherein the quality of service specification derivation element tests the components and the relations between the components to derive the quality of service specification (i.e. 0056; 0060).

Negri does not explicitly disclose that the quality of service specification (the service delivery model) is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment. However, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to derive a runtime contract from the service delivery model (described at build time) at the point of service delivery (runtime) to enforce the service delivery specification in the model. The service delivery model in Negri would help "ensuring the quality of eService delivery (0023)" when deployed at runtime.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Negri discloses a runtime engine for deploying said runtime contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 3:

Negri does not explicitly disclose that said runtime contract comprises a messaging requirement contract. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a messaging requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 4:

Negri does not explicitly disclose that said runtime contract comprises a transactionality requirement contract. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a transactionality requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 5:

Negri does not explicitly disclose that said runtime contract comprises a security requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a security requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 6:

Negri does not explicitly disclose that said runtime contract comprises a recoverability requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a recoverability requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 7:

Negri does not explicitly disclose that said runtime contract comprises a completion requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a completion requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 8:

Negri does not explicitly disclose that said runtime contract comprises a completion requirement contract. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a completion requirement contract specifying transactional behavior in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 9:

Negri does not explicitly disclose that said runtime contract comprises a completion requirement contract specifying compensation behavior. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed

system to include a completion requirement contract specifying compensation behavior in the service delivery contract to help “ensuring the quality of eService delivery (0023).”

Per claim 10:

Negri does not explicitly disclose that said runtime contract comprises at least one of a reliability, availability and serviceability requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include at least one of a reliability, availability and serviceability requirement in the service delivery contract to help “ensuring the quality of eService delivery (0023).”

Per claim 11:

The rejection of claim 1 is incorporated, and further, Negri discloses a quality of delivery requirement contract (i.e. “Service Level Agreements (SLA),” 0014; “quality of eService delivery,” 0023) as claimed.

Per claim 12:

Negri does not explicitly disclose that said runtime contract comprises at least one of a priority requirement and a response goal requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include at least one of a priority requirement and a response goal requirement in the service delivery contract to help “ensuring the quality of eService delivery (0023).”

Per claim 13:

Negri does not explicitly disclose that said runtime contract comprises a performance requirement. Negri discloses a service level agreement (SLA) that specify the levels of service (0014) and a Service level management tool that



measures service delivery (0036). Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri's disclosed system to include a performance requirement in the service delivery contract to help "ensuring the quality of eService delivery (0023)."

Per claim 14:

The rejection of claim 1 is incorporated, and further, Negri discloses the quality of service specification is stored in a repository (i.e. 0051).

Per claim 17:

The rejection of claim 1 is incorporated, and further, Negri discloses a quality of service specification is stored in a modeling language (i.e. "eService modeling," 0044) as claimed.

Per claims 18-30 and 33, they are the method versions of claims 1, 2, 4-14 and 17, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 2, 4-14 and 17 above.

Per claims 34-46 and 49, they are the computer program product versions of claims 18-30 and 33, respectively and are rejected for the same reasons set forth in connection with the rejection of claims 18-30 and 33 above.

5. Claims 15, 16, 31, 32, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negri (US 2002/0059079) in view of Schmidt ("QoS for Distributed Object Computing Middleware -- Fact or Fiction?," May 22nd, 1997, Columbia University), further in view of Koistinen et al. ("Quality of Service Aware Distributed Object Systems," 5/1999) hereinafter referred to as "Koistinen."

Per claim 16:

The rejection of claim 1 is incorporated, and further, Negri and Schmidt do not explicitly teach that the quality of service specification is stored in XML. However, Koistinen teaches that storing a quality of service specification in a tagged markup language such as XML was known in the pertinent art, at the time applicant's invention was made,

“so that it can be understood readily by humans and parsed easily (pg 9, Implementation section)” such as that disclosed in Koistinen. It would have been obvious for one skilled in the art of the pertinent art to modify Negri and Schmidt’s disclosed system to use XML. The modification would be obvious because one skilled in the art would be motivated to provide readability and ease parsing as taught by Koistinen (pg 9, Implementation section).

Per claim 32, it is the method version of claim 16, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 48, it is the computer program version of claim 16, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 15, this claim is broader version of the claimed system discussed in claim 16 wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above. XML in claim 16 is a tagged markup language. Therefore, accordingly, see the rejection of claim 16 above.

Per claim 31, it is the method version of claim 15, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 15 above.

Per claim 47, it is the computer program version of claim 15, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 15 above.

#### **(10) Response to Argument**

1)The appellant states that Negri is directed to deriving an e-service management strategy based on a business process model...a BeX is developed independent of a specific model and utilizes relationships within an e-service model to analyze the impact of related components, and includes a local processing engine. In contrast, in the instant invention, the runtime contract **specifies services that are required to be provided by a target environment**. It would have not been obvious to modify Negri’s disclosed system to derive a runtime contract from a service delivery model (brief, page 5-6).

In response, Negri discloses “deriving an e-service management strategy based on said business process specification...ensuring the service quality of said e-service (claim 1; 0036; 0050; 0057; 0063).” The specification is defined using the eService model. Negri’s eService management (eSM) uses the eService model and BeXs to “assure the customer experience at the point of service delivery (0063).” The eService model specifies the components in a service, process, responsibilities (i.e. 0048; 0049) and establishes implicit and explicit relationships of the components (i.e. 0050; 0051), their dependences (i.e. 0050), resources sharing (0050), data and control flows among the components (0050). The eSM provides a service level agreement (requirement/contract) from the model specification defining Qos (Quality of Service) and BeX that monitors/analyzes the behavior of components, processes, and services to assure the Qos at the point of service delivery (runtime) (0063; 0040; 0044) . Therefore, the eSM fulfills analyzing the service delivery process and rapid deployment using a combination of eService modeling and a BeX to “deliver on quality of service commitments with confidence (0044).” Although Negri does not explicitly state that the Qos specification constructed from the eSM is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment, the service delivery model specification defining how the business process should be executed at runtime in combination of BeXs control (0063) would be later sent to a target (customers) processor for execution (runtime engine) to realize the Qos specified in the eService model. The Qos specification in the model becomes the SLA (service level agreement) which is the runtime contract when executed at the target. Therefore, it would have been obvious for a person having ordinary skill in the pertinent art at the time the invention was made to modify Negri’s disclosed system to derive a runtime contract from the service delivery model at the point of service

delivery to enforce the quality of service specified in the model. The derived eService management strategy by using the eService delivery model and BeXs in Negri would help “ensuring the quality of eService delivery (0023)” when deployed at runtime.

2) Negri does not teach the derivation of a runtime contract from a quality of service specification that is derived by a quality of service specification derivation element that tests components and relations between the components or for that matter the use of runtime contracts. While Negri discloses the use of BeXs, Negri BeXs do not test components and relations between components to derive a quality of service specification, the BeXs do not create a quality of service specification. As such, Negri does not teach a quality of service specification derivation element that test components and relations between components to derive a quality of service specification (brief, 6).

In response, Negri’s “eSM manages the service resources with an exclusive focus on ensuring peak performance of eBusiness services....All monitoring, analysis and control is done in context of the service (0040)” by using BeXs that observe, learn,...optimize, and control the entire functional model in the eService model (0056). The BeX “utilizes the relationships within the eService model to analyze the impact of related components” and “leverages the relationships in the model to analyze the effect of a component on eService delivery (0057)” to replicate service delivery best practices and focus on eService delivery more efficiently (0059). Therefore, the eSM tests the components and relationships among them in the eService model by using BeXs to derive the “e-service management strategy based on the business process specification “aiming at ensuring the quality of eService delivery (0023; page 5, claim 1)” and assuring “the customer experience at the point of service delivery (0063).”

3) Negri does not suggest a quality of service specification derivation element that also derives a quality of service specification by implication from relations between components, control flows, data flows, and resources. Negri is merely directed to a service level management tool that measures service delivery. Negri merely discloses that an e-service model establishes implicit and explicit relationships between components that defines an actual topology of the model (brief, 6-7).

In response, the instant specification does not describe how the implicit relationship is specifically established. The specification, in page 14 states that the QOS specification derivation engine derives the implicit QOS requirements for the model from the relationships within the specifications for the composed model. Negri clearly discloses that the components relationships can be established implicitly as well as explicitly (0050). That is, in Negri, the dependencies among components, resource sharing, exchanging data with each other and working together in complex flows of control can be established implicitly (0050). For example, the eService delivery process is organized into a dependency graph of business applications with their operation relationships, thus the Customer Order Entry system depends on an implicit access to the Customer Database etc and the eSM recognizes and understands these dependencies whether they are within a physical organization or across a virtual enterprise (0051).

4) Dependent claims 8, 24, and 40: The appellant states that Negri does not disclose a runtime contract that is a completion requirement contract that specifies transactional behavior (brief 7-8).

In response, the instant specification does not describe any inventive implementation of such a completion/transactional requirement. Furthermore, the eService model in Negri can define any requirement that can ensure the quality of eService delivery such as transactional/completion requirement so that the eService can be rapidly and flexibly deployed (0043) based on such a requirement defined in the model. For example, the model would specify such a transactional behavior to enable the Encryption Server (0051) to be accessed for “secure transactions (0051)” so that the eService delivery can be completed properly and securely. Therefore, it would have been obvious to modify Negri’s eSM tool to specify a completion requirement contract specifying transactional behavior in the eService model (0050) to help complete transaction, i.e. inter-company transactions (0051).

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

Art Unit: 2193

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Insun Kang/

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